

PATENT
Attorney Docket No. 401530/SHINSEI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

KITAMURA et al.

Application No. Unassigned

Filed: January 16, 2002

For: EXCITATION CONTROL DEVICE
AND EXCITATION CONTROL
METHOD

Art Unit: Unassigned

Examiner: Unassigned

PENDING CLAIMS AFTER ENTRY OF PRELIMINARY AMENDMENT

1. An excitation control device comprising:
 - voltage detecting means for detecting a voltage of an output terminal of a synchronous machine which is connected to a power transmission system through a transformer;
 - reactive current detecting means for detecting a reactive current output from the synchronous machine;
 - voltage setting means for setting a reference voltage of the output terminal of the synchronous machine according to the reactive current detected by the reactive current detecting means, a reference voltage of an output side of the transformer, and a phase compensation transfer function to quicken attenuation of an electric power fluctuation; and
 - control means for controlling an exciting system of the synchronous machine according to a difference between the reference voltage set by the voltage setting means and the voltage of the output terminal of the synchronous machine detected by the voltage detecting means.
2. The excitation control device according to claim 1, wherein the reference voltage of the output terminal of the synchronous machine is set by the voltage setting means based on the voltage of the output terminal of the synchronous machine detected by the voltage detecting means.
3. An excitation control method, comprising:
 - detecting a voltage of an output terminal of a synchronous machine which is connected to a power transmission system through a transformer;
 - detecting a reactive current output from the synchronous machine;

setting a reference voltage of the output terminal of the synchronous machine according to the reactive current, a reference voltage of an output side of the transformer, and a phase compensation transfer function to quicken attenuation of an electric power fluctuation; and

controlling an exciting system of the synchronous machine according to a difference between the reference voltage of the output terminal of the synchronous machine and the voltage of the output terminal of the synchronous machine.

4 The excitation control method according to claim 3, wherein setting the reference voltage of the output terminal of the synchronous machine includes setting the reference voltage of the output terminal of the synchronous machine based on the voltage of the output terminal of the synchronous machine.